AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims for the above-captioned patent application. Underlined portions relate to added material and strike-through or bracketed portions relate to deleted materials.

Listing of Claims:

Claims 1-87 (Canceled).

88. (Previously Amended) A stereo endoscopic system as recited in Claim 159, wherein views of said first and second images converge at a given object distance such that said views overlap 100% at said object distance.

89. (Canceled).

90. (Canceled).

91. (Previously Amended) A stereo endoscopic system as recited in Claim 159, wherein said refractive image splitter is contained within a detachable distal tip which is usable with said endoscopic probe.

92. (Previously Amended) A stereo endoscopic system as recited in Claim 159, wherein said first and second acquired stereo images are symmetrical.

93. (Previously Amended) A stereo endoscopic system as recited in Claim 159, further comprising a window disposed between said refractive image splitter and said object, wherein contact is prevented between external media and said image splitter.

94. (Previously Amended) A stereo endoscopic system as recited in Claim 159, further comprising a display for viewing said first and second acquired stereo images as detected by said electronic imager.

95. (Previously Amended) A stereo endoscopic system as recited in Claim 94, wherein only one of said first and second acquired stereo images is

displayed.

96. (Previously Amended) A stereo endoscopic system as recited in Claim 94, further comprising viewing means for viewing said first and second images such that said first image goes to a right eye of a viewer, and said second image goes to a left eye of said viewer wherein said viewer is provided with a three dimensional perspective.

97. (Currently Amended) A stereo endoscopic system as recited in Claim 94, including measuring means for comparing parameters of said first and second acquired images such that measurement data of said object is determined, wherein said measurement data includes at least one geometric characteristic of the object, said measuring means including at least one onscreen cursor ~~and means for displaying a symbol, which indicates both a type of measurement being performed and a role of said cursor in the type of measurement~~ wherein at least one portion of said first and second acquired stereo images is displayed at a different magnification relative to the displayed first and second images and wherein both said at least one portion and at least one of said first and second acquired stereo images are displayed simultaneously, said at least one portion containing said onscreen cursor for aiding in the real-time positioning of same.

98. (Previously Amended) A stereo endoscopic system as recited in Claim 159, further comprising measuring means for comparing parameters of said first and second images so that measurement data of said object are determined, wherein said measurement data includes at least one geometric characteristic of said object.

99. (Previously Amended) A stereo endoscopic system as recited in Claim 98, further comprising an optical characteristics data set used by said measuring means to determine said measurement data.

100. (Currently Amended) A stereo endoscopic system as recited in Claim 99, wherein a user is signaled <u>that the detachable distal tip emplaced on said probe may have been incorrectly identified</u> if a difference between said optical characteristics data set and global alignment data determined from said image exists.

101. (Currently Amended) A stereo endoscopic system as recited in Claim 98, wherein said system is adapted for receiving one of a plurality of detachable probe tips, wherein each of said detachable probe tips has a plurality of corresponding optical characteristics data [[set]] sets, and wherein data determined from said image is used to select which optical characteristics data set corresponds to said detachable probe tip emplaced on said probe.

102. (Currently Amended) A stereo endoscopic system as recited in Claim 101, wherein each of said ~~probes~~ plurality of detachable probe tips has a plurality of corresponding optical characteristics data [[set]] sets, and wherein data determined from said image is used to select which optical characteristics data set corresponds to said ~~probes~~ detachable probe tip emplaced on said probe.

103. (Currently Amended) A stereo endoscopic system as recited in Claim 99, wherein said system is used in an inspection device, said system further comprising calibration means for generating said optical characteristics data set of said device, wherein said calibration means includes a plurality of object target points at a plurality of object target distances which appear in both of said first and second acquired stereo images when viewed with said probe.

104. (Previously Amended) A stereo endoscopic system, according to Claim 103, wherein said calibration means includes means for color balancing.

105. (Previously Amended) A stereo endoscopic system as recited in Claim 103, wherein said plurality of object target points comprises at least two object target points with known spacing between them at a first object target distance and at least two object target points with known spacing between them at a second object target distance, wherein a distance between said first and second object target distances is known.

106. (Previously Amended) A stereo endoscopic system as recited in Claim 103, wherein said plurality of object target points comprises at least two object target points with known spacing between them at a first object target

distance and at least one object target point at a second object target distance, wherein a distance between said first and second object target distances is known, and wherein one of said first and second object target distances is known.

107. (Previously Amended) A stereo endoscopic system as recited in Claim 103, wherein said optical characteristics data set includes optical mapping distortion, magnification at one or more object target distances, and parallax information, wherein said calibration means generates said optical characteristics data set from only one image.

108. (Previously Amended) A stereo endoscopic system as recited in Claim 103, further comprising means for automatic detection and identification of said plurality of object target points.

109. (Previously Amended) A stereo endoscopic system as recited in Claim 103, wherein calibration means includes using a reflection of illumination at at least one known object target distance.

110. (Previously Amended) A stereo endoscopic system as recited in Claim 99, wherein said optical characteristics data set is stored in non-volatile memory in said probe.

111. (Previously Amended) A stereo endoscopic system as recited in Claim 99, wherein said optical characteristics data set and said first and second acquired stereo images are stored in a single file.

112. (Previously Amended) A stereo endoscopic system as recited in Claim 99, adjusting means for adjusting said optical characteristics data set of said device to increase the accuracy of said measurement data when a distal portion of said probe is operated in a medium with an index of refraction which differs from that of air.

113. (Previously Amended) A stereo endoscopic system as recited in Claim 98, wherein said measuring means includes matching means for matching a

same point viewed on said object in each of said first and second acquired stereo images.

114. (Previously Amended) A stereo endoscopic system as recited in Claim 113, wherein said matching means includes automatic matching means for automatic matching of a user designated point viewed on said object in said first image to a corresponding point in said second image.

115. (Previously Amended) A stereo endoscopic system as recited in Claim 114, wherein said automatic matching means includes means for requesting user selection of a correct matched point from a plurality of automatically-identified possible matches.

116. (Previously Amended) A stereo endoscopic system as recited in Claim 114, wherein, when a position of said user-designated point on said viewed object in said first image is changed by said user, said automatic matching dynamically occurs without further user intervention.

117. (Previously Amended) A stereo endoscopic system as recited in Claim 114, wherein said automatic matching means includes global alignment means for performing an automatic global alignment of said first and second acquired stereo images.

118. (Previously Amended) A stereo endoscopic system recited in Claim 117, wherein said global alignment means includes means for determining a global vertical shift between said first and second acquired stereo images.

119. (Previously Amended) A stereo endoscopic system as recited in Claim 117, wherein said global alignment means includes means for automatically determining one or more regional horizontal shifts between said first and second images.

120. (Previously Amended) A stereo endoscopic system as recited in Claim 117, wherein said global alignment means uses the positions of one or more

user-designated matched points in said first and second acquired stereo images to aid in performing said global alignment.

121. (Previously Amended) A stereo endoscopic system as recited in Claim 117, wherein a correction by a user of an incorrect automatic match automatically invokes said global alignment means.

122. (Previously Amended) A stereo endoscopic system as recited in Claim 117, wherein data derived from said global alignment means is used to make said automatic matching of said matching means faster than otherwise.

123. (Previously Amended) A stereo endoscopic system as recited in Claim 117, wherein data derived from said global alignment means is used to reduce a probability of incorrect matches of subsequent user-defined points.

124. (Previously Amended) A stereo endoscopic system as recited in Claim 117, further comprising means, based on data derived from said global alignment means, for determining and conveying to a user an overlap region of said first and second acquired stereo images in which measurements are performed.

125. (Currently Amended) A stereo endoscopic system as recited in Claim 98, wherein said measuring means includes means for indicating a measurement accuracy of said measurements, wherein said measurement accuracy is determined based at least on object distance.

126. (Currently Amended) A stereo endoscopic system as recited in Claim 125, wherein said measuring means includes means for an operator to designate a maximum estimated error limit for said measurement accuracy above which said device indicates a warning.

127. (Previously Amended) A stereo endoscopic system as recited in Claim 98, wherein said measuring means includes using at least one onscreen cursor and means for displaying a symbol, which indicates both a type of measurement being performed and a role of said cursor in said type of measurement.

128. (Previously Amended) A stereo endoscopic system as recited in Claim 98, wherein said measuring means includes using at least one onscreen cursor and wherein at least one measurement point designated by a user when performing one type of measurement is kept even when a different type of measurement is selected.

129. (Previously Amended) A stereo endoscopic system as recited in Claim 98, wherein said determined measurements are stored as non-viewable data along with said images in a single file.

Claims 130-134 (Canceled).

135. (Previously Amended) A method as recited in Claim 161, further comprising the step of comparing parameters of said first and second acquired stereo images to determine measurement data of said object.

136. (Previously Amended) A method as recited in Claim 161, further comprising the step of determining at least one geometric characteristic of said object.

137. (Currently Amended) A method as recited in Claim 135, further comprising the step of generating an optical characteristics data set of said endoscope by comparing a known set of object target points at a plurality of object target distances.

138. (Previously Presented) A method as recited in Claim 137, further comprising the step of using said optical characteristics data set to determine said measurement data.

139. (Previously Presented) A method as recited in Claim 137, further comprising the step of storing said optical characteristics data set in non-volatile memory in said probe.

140. (Previously Presented) A method as recited in Claim 137, further comprising the step of adjusting said optical characteristics data set so that said probe is operable in a medium with an index of refraction other than air.

141. (Previously Presented) A method as recited in Claim 137, wherein said step of generating an optical characteristics data set includes color balancing.

142. (Previously Presented) A method as recited in Claim 137, wherein said set of known object target points comprises at least two object target points at a first object target distance and at least one object target point at a second object target distance.

143. (Previously Amended) A method as recited in Claim 137, further comprising generating said optical characteristics data set from said first and second acquired stereo images, wherein said optical characteristics data set includes optical mapping distortion and magnification at one or more object target distances.

144. (Previously Presented) A method as recited in Claim 137, further comprising the step of automatically detecting and identifying said known set of object target points.

145. (Previously Presented) A method as recited in Claim 137, wherein said step of generating said optical characteristics data set includes using a reflection of illumination at at least one known object target distance.

146. (Previously Presented) A method as recited in Claim 135, further comprising the step of matching a same point in each of said first and second images.

147. (Previously Presented) A method as recited in Claim 146, further comprising the step of automatically matching a user designated point from said first image to said second image.

148. (Previously Amended) A method as recited in Claim 147, wherein

said step of automatically matching includes performing a global alignment of said first and second acquired stereo images.

149. (Previously Amended) A method as recited in Claim 148, wherein said step of performing said global alignment includes determining a global vertical shift between said first and second acquired stereo images.

150. (Previously Amended) A method as recited in Claim 148, wherein said step of performing said global alignment includes determining one or more regional horizontal shifts between said first and second acquired stereo images.

151. (Previously Presented) A method as recited in Claim 148, wherein data derived from the step of automatically matching at least one matched point in said images is used to make the step of automatically identifying at least one user defined point from said first image to said second image complete faster than otherwise.

152. (Previously Amended) A method as recited in Claim 146, wherein said step of matching includes the step of automatically identifying at least one matched point in said first and second acquired stereo images.

153. (Previously Amended) A method as recited in Claim 152, wherein data derived from the step of automatically identifying at least one matched point in said first and second acquired stereo images is used to reduce a probability of incorrect matches of subsequent user-defined points.

154. (Previously Amended) A method as recited in Claim 152, further comprising the step of determining and conveying to a user an overlap region of said first and second acquired stereo images in which measurements are performed.

155. (Currently Amended) A method as recited in Claim 135, wherein the step of comparing parameters includes the step of indicating a measurement accuracy of said measurements, wherein said measurement accuracy is determined based at least on object distance.

156. (Currently Amended) A method as recited in Claim 155, wherein the step of comparing parameters includes enabling an operator to designate a maximum estimated error limit for said measurement accuracy above which limit said device indicates a warning to said operator.

157. (Previously Presented) A method as recited in Claim 135, wherein the step of comparing parameters includes using at least one onscreen cursor.

158. (Previously Presented) A method as recited in Claim 135, further comprising the step of storing said determined measurements as non-viewable data along with said images in a single file.

159. (Currently Amended) A stereo endoscopic system comprising:

an endoscopic probe;

an electronic imaging device; and

an optical system, each of said electronic imaging device and said optical system being ~~housed within said probe and~~ arranged entirely along a single optical axis, said optical system including:

a refractive image splitter and at least one focusing lens disposed between said electronic imaging device and said refractive image splitter, wherein said refractive image splitter directly passes an image of an object of interest to be split along said single optical axis into two images of said object that are guided through said refractive image splitter entirely along said single optical axis to said at least one focusing lens without optical power between the object of interest and said at least one focusing lens, said two images being representative of first and second acquired stereo images of said object of interest that are focused by said at least one focusing lens along said single optical axis onto said electronic imaging device;

wherein said refractive image splitter is a refractive image-splitting prism having a ridge pointing away from said electronic imaging device and a substantially flat base facing said electronic imaging device.

160. (Withdrawn)

161. (Currently Amended) A method for creating stereo images using an endoscope for use in imaging and measuring a defect of an object, said method comprising the steps of:

splitting a view of the object of interest viewed with the endoscope into first and second images of said object using a refractive image splitter disposed along a single optical axis, wherein a single image of the object is transmitted to said image splitter, said first and second images being intermixed through said image splitter and transmitted to at least one focusing lens disposed along said single optical axis without optical power being applied between an object plane and said at least one focusing lens, and wherein said refractive image splitter is a refractive image-splitting prism having a ridge pointing away from an electronic imaging device and a substantially flat base facing said electronic imaging device;

focusing said first and second images from said refractive image splitter onto [[an]] said electronic imager disposed along said single optical axis; and

detecting said first and second adjacent images using said electronic imager for display thereof.

Claims 162-166. (Withdrawn)